

## **CLAIMS**

What is claimed is:

1. A storage area network (SAN) management system to generate perspectives of a SAN topology, the SAN management system including:
  - a SAN manager program to monitor a storage area network (SAN);
  - a SAN management database linked with the SAN manager program, wherein the SAN management database maintains information identifying devices included within the SAN and connections between the devices;
  - a plurality of sensor agents positioned within devices included within the SAN, wherein the sensor agents gather information associated with events occurring within the SAN and provide the gathered information to the SAN manager for inclusion within the SAN management database; and
  - a topology viewer linked to the SAN manager to generate a user requested topology perspective according to data included within the SAN management database and data associated with a previously requested topology perspective.
2. The system of claim 1 wherein the SAN includes hosts, storage devices and switches.
3. The system of claim 2 wherein the host comprises a database server or a file server.

4. The system of claim 1 wherein the topology perspective is generated for all devices within the SAN which are visible to a particular host.
5. The system of claim 1 wherein the topology perspective is generated for all devices within the SAN which are visible to a particular storage device.
6. The system of claim 1 wherein a previously requested topology perspective is utilized by the topology viewer in the generation of a new user requested topology perspective.
7. The system of claim 6 the topology viewer includes a memory for storing information pertaining to the previously requested topology perspectives.
8. The system of claim 7 wherein the information pertaining to previously requested topology perspectives includes paths which provide access between devices within the SAN.
9. A method for generating a perspective of a SAN topology, comprising:
  - receiving a request to provide a perspective of a SAN topology;
  - identifying data paths within the requested perspective that have been previously calculated;

calculating data paths within the requested perspective which have not been previously calculated; and

generating the requested perspective according to both the previously calculated data paths and the calculated data paths.

10. The method of claim 9 wherein the perspective includes all SAN devices within the SAN topology which are connected to an identified SAN device and all SAN devices which are accessible to the identified SAN device, wherein the identified SAN device is included within the SAN topology.

11. The method of claim 10 wherein the perspective includes a graphical map of all devices within the SAN topology which are visible to the identified device, connections between all of the devices included within the graphical map.

12. The method of claim 10 wherein the identified SAN device includes a host, a storage device and a switch.

13. The method of claim 12 wherein the host comprises a database server or a file server and the storage devices comprise JBODs and storage controllers.

14. A SAN management system device including system readable code readable by a server system for generating a perspective of a SAN topology, comprising:

logic means for receiving a request to provide a perspective of a SAN topology;

logic means for identifying data paths within the requested perspective that have been previously calculated;

logic means for calculating data paths within the requested perspective which have not been previously calculated; and

logic means for generating the requested perspective according to both the previously calculate data paths and the calculated data paths,

whereby the perspective includes all SAN devices within the SAN topology which are connected to an identified SAN device and all SAN devices which are accessible to the identified SAN device, wherein the identified SAN device is included within the SAN topology,

whereby the SAN device includes a host, a storage device and a switch.

15. A method of updating each of a cache of including perspectives of hosts, devices and switches in a SAN, based on a change to the SAN's configuration or an identification of devices missing from the SAN's configuration.